

## Abstract

### Programmable echo cancellation filter

Programmable echo cancellation filter for echo signal cancellation for a transceiver having a signal input (13) for receiving the transmission signal emitted by the transceiver (1), an input resistor (36) connected to the signal input (13), an operational amplifier (39), whose signal input (38) is connected to the input resistor (36) and whose signal output (41) is connected to an output resistor (43), a first programmable resistor circuit (48), which is provided between the signal output (41) of the operational amplifier (39) and the signal input (38) of the operational amplifier, a second programmable resistor circuit (51), which is provided between the output resistor (43) and a signal output (15) of the echo cancellation filter (14), a third programmable resistor circuit (55), which is provided between the first programmable resistor circuit (48) and the signal output (15) of the echo cancellation filter (14), the programmable resistor circuits (48, 51, 55) each having a plurality of resistors (65) which are terminated in parallel and are connected to a first terminal (68) of an associated controllable switch (66), the controllable switches (66) having a second terminal (69) connected to a virtual reference voltage terminal with a very low voltage swing.